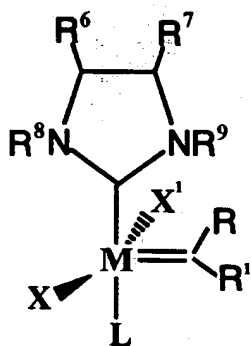


In the Claims:

Please add claims 41 – 64 as follows:

41. The method of Claim 32 wherein the olefin is cyclic or acyclic.
42. The method of Claim 32 wherein the olefin bears at least one electron withdrawing group.
43. The method of Claim 42 wherein the electron withdrawing group is selected from the group consisting of esters, aldehydes, ketones, and phosphonates.
44. The compound of Claim 1 wherein at least one moiety selected from the group consisting of L, R, R¹, X and X¹ is linked with at least one other moiety selected from the group consisting of L, R, R¹, X and X¹, to form a bonded ligand array.
45. A composition comprising:
- (a) a compound of the formula



wherein:

M is Ru or Os;

X and X¹ are each independently an anionic ligand;

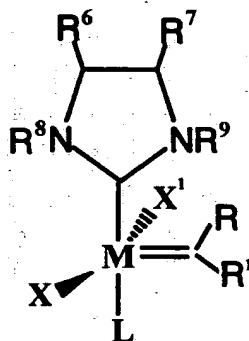
L is a neutral electron donor ligand; and

R, R¹, R⁶, R⁷, R⁸ and R⁹ are each independently hydrogen or a substituent selected from the group consisting of C₁-C₂₀ alkyl, C₂-C₂₀ alkenyl, C₂-C₂₀ alkynyl, aryl, C₁-C₂₀ carboxylate, C₁-C₂₀ alkoxy, C₂-C₂₀ alkenyloxy, C₂-C₂₀ alkynyloxy, aryloxy, C₂-C₂₀ alkoxycarbonyl, C₁-C₂₀ alkylthiol, aryl thiol, C₁-C₂₀ alkylsulfonyl and C₁-C₂₀ alkylsulfinyl, the substituent optionally substituted with one or more moieties selected from the group consisting of C₁-C₁₀ alkyl, C₁-C₁₀ alkoxy, aryl, and a functional group selected from the group consisting of hydroxyl, thiol, thioether, ketone, aldehyde, ester, ether, amine, imine, amide, nitro, carboxylic acid, disulfide, carbonate, isocyanate, carbodiimide, carboalkoxy, carbamate, and halogen; and

(b) an unsaturated carbonyl compound.

46. The composition of Claim 45 wherein the carbonyl compound is conjugated.
47. The composition of Claim 45 wherein (b) is selected from the group consisting of ketones, aldehydes, amides, and carboxylic acids.
48. The composition of Claim 45 wherein (b) is an acrylate.

49. The composition of Claim 45 wherein (b) is methyl methacrylate.
50. The composition of Claim 45 wherein M is Ru, X and X¹ are each Cl, L is a phosphine of the formula PR³R⁴R⁵, where R³, R⁴, and R⁵ are each independently aryl, C₁-C₁₀ alkyl, or cycloalkyl; R is hydrogen and R¹ is substituted or unsubstituted phenyl or vinyl; and the unsaturated carbonyl compound is an acrylate.
51. The compound of claim 1, wherein L is bonded together with one of X and X¹ to form a bidentate ligand.
52. The compound of claim 1, wherein L is bonded together with one of R and R¹ are bonded together to form a bidentate ligand.
53. The compound of claim 1, wherein R and R¹ are bonded together.
54. A compound of the formula



wherein:

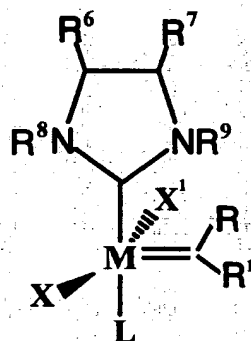
- M is ruthenium or osmium;
- X and X¹ are each independently an anionic ligand;
- L is a neutral electron donor ligand;
- R, R¹, R⁶, R⁷, R⁸ and R⁹ are each independently hydrogen or a substituent selected from the group consisting of C₁-C₂₀ alkyl, C₂-C₂₀ alkenyl, C₂-C₂₀ alkynyl, aryl, C₁-C₂₀ carboxylate,

C₁-C₂₀ alkoxy, C₂-C₂₀ alkenyloxy, C₂-C₂₀ alkynyloxy, aryloxy, C₂-C₂₀ alkoxy carbonyl, C₁-C₂₀ alkylthiol, aryl thiol, C₁-C₂₀ alkylsulfonyl and C₁-C₂₀ alkylsulfinyl, the substituent optionally substituted with one or more moieties selected from the group consisting of C₁-C₁₀ alkyl, C₁-C₁₀ alkoxy, aryl, and a functional group selected from the group consisting of hydroxyl, thiol, thioether, ketone, aldehyde, ester, ether, amine, imine, amide, nitro, carboxylic acid, disulfide, carbonate, isocyanate, carbodiimide, carboalkoxy, carbamate, and halogen; and

at least one moiety selected from the group consisting of L, R, R¹, X and X¹ is linked with at least one other moiety selected from the group consisting of L, R, R¹, X and X¹, to form a bonded ligand array.

55. The method of claim 23, wherein at least one moiety selected from the group consisting of L, R, R¹, X, and X¹ is linked with at least one other moiety selected from the group consisting of L, R, R¹, X and X¹, to form a bonded ligand array.
56. The method of claim 23, wherein L is bonded together with one of X and X¹ to form a bidentate ligand.
57. The method of claim 23, wherein L is bonded together with of R and R¹ to form a bidentate ligand.
58. The method of claim 23, wherein R and R¹ are bonded together.
59. The method of claim 32, wherein at least one moiety selected from the group consisting of L, R, R¹, R⁸, R⁹, X and X¹ is linked with at least one other moiety selected from the group consisting of L, R, R¹, R⁸, R⁹, X and X¹, to form a bonded, bidentate, or multidentate ligand array.
60. The method of claim 32, wherein L is bonded together with one of X and X¹ are bonded together to form a bidentate ligand.

61. The method of claim 32, wherein L is bonded together with one of R and R¹ to form a bidentate ligand.
62. The method of claim 32, wherein R and R¹ are bonded together.
63. A method for synthesizing a cyclic olefin by ring-closing metathesis, the method comprising the step of contacting an acyclic olefin with a compound of the formula



wherein:

M is Ru or Os;

X and X¹ are each independently an anionic ligand;

L is a neutral electron donor ligand; and

R, R¹, R⁶, R⁷, R⁸ and R⁹ are each independently hydrogen or a substituent selected from the group consisting of C₁-C₂₀ alkyl, C₂-C₂₀ alkenyl, C₂-C₂₀ alkynyl, aryl, C₁-C₂₀ carboxylate, C₁-C₂₀ alkoxy, C₂-C₂₀ alkenyloxy, C₂-C₂₀ alkynyloxy, aryloxy, C₂-C₂₀ alkoxycarbonyl, C₁-C₂₀ alkylthiol, aryl thiol, C₁-C₂₀ alkylsulfonyl and C₁-C₂₀ alkylsulfinyl, the substituent optionally substituted with one or more moieties selected from the group consisting of C₁-C₁₀ alkyl, C₁-C₁₀ alkoxy, aryl, and a functional group selected from the group consisting of hydroxyl, thiol, thioether, ketone, aldehyde, ester, ether, amine, imine, amide, nitro, carboxylic acid, disulfide, carbonate, isocyanate, carbodiimide, carboalkoxy, carbamate, and halogen.

64. The method of claim 58 wherein the acyclic olefin is a C₅-C₆₀ acyclic olefin.